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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,663	09/20/2000	Shigeyuki Ueda	ROH-026	5545

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EXAMINER
COLEMAN, WILLIAM D

ART UNIT	PAPER NUMBER
2823	

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/665,663	Applicant(s) UEDA, SHIGEYUKI	
	Examiner W. David Coleman	Art Unit 2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-5,7 and 10-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-5,7 and 10-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
> (f) he did not himself invent the subject matter sought to be patented.

Claims 2, 3, 4, 5, 7, 10, 11, 12, 13 and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by Nakamura Tomohito, Japanese Patent Abstract Publication 2000-234904.

2. Pertaining to claim 11, Tomohito discloses a semiconductor device as claimed. See **Drawings 1-6**, where Tomohito teaches a semiconductor chip adapted for electrical connection to an external terminal, comprising:

a semiconductor chip body **1** having a surface with internal wiring **23** disposed thereon,

at least one surface area of the internal wiring defining a external connection pad and at least one other surface area different from the at least one surface area of the internal wiring defining an internal connection pad, both the external connection pad and the internal connection pad facing in a same direction as the surface of the semiconductor chip body;

a wire connecting portion fabricated from a metal material **12** having oxidation resistance (gold, see paragraph [0019]) and electrically connected to the external connection pad **BS/BM**;

an electrical contact projection fabricated from a metal material having oxidation resistance and electrically connected to the internal connection pad;

a surface protective film covering the internal wiring and the surface of the semiconductor chip body while contacting the wire connecting portion and the electrical contact projection in a surrounding manner such that a segment of the wire connecting portion and a segment of the electrical contact projection project from the surface protective film; and

a wire electrically connected to the segment of the wire connecting portion for connecting the semiconductor chip to the external terminal, wherein

the electrical contact projection is in a form of a bump and the wire connecting portion substantially has a shape of the bump.

3. Pertaining to claim 2, Tomohito teaches a semiconductor device wherein said semiconductor chip is overlapped with and joined to a surface of antoher solid device in a state where said surface protective film is opposed to a surface of the solid device.

4. Pertaining to claim 3, Tomohito teaches the semiconductor chip according to claim 2, further comprising:

an internal connection pad which is formed by partially exposing said the internal wiring from said surface protective film in a portion of different from said external connection pad, and

an electrical contact projection formed in a raised state on the internal connection pad using a metal material having oxidation resistance in order to make electrical connection to the said solid device

5. Pertaining to claim 4, Tomohito teaches the semiconductor chip according to claim 2, wherein said solid device includes another semiconductor chip.

6. Pertaining to claim 5, Tomohito teaches the semiconductor chip according to claim 3, wherein said wire connection portion is composed of the same material as that for said electrical contact projection.

7. Pertaining to claim 7, Tomohito discloses the semiconductor chip according to claim 12, wherein said wire connecting portion is composed of the same material as that for said electrical contact projection.

8. Pertaining to claim 10, Tomohito discloses the semiconductor chip according to claim 12, further comprising a lead frame and a bonding wire, the bonding wire electrically interconnecting the lead frame and the wire connecting portion.

9. Pertaining to claim 12, Tomohito discloses a semiconductor device having a chip-on-chip structure in which a secondary chip is overlapped with and joined to a primary chip, wherein said chip comprises

a primary chip body having a surface with internal wiring disposed thereon, at least one surface area of the internal wiring defining an external connection pad and at least one other surface area different from the at lest one surface area of the internal wiring defining an internal connection pad, both the external connection pad and the internal connection pad facing in a same direction as the surface of the primary chip body;

a wire connection portion fabricated from a metal material having oxidation resistance and electrically connected to the external connection pad;

a electrical contact projection fabricated from a metal material having oxidation resistance and electrically connected to the internal connection pad, the electrical contact projection operative to electrically connect the primary and secondary chips together; and

a surface protective film covering the internal wiring and the surface of the primary chip body while contacting the wire connecting portion and the electrical contact projection in a surrounding manner such that a segment of the wire connecting portion and a segment of the electrical contact projection from the surface protective film.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura Tomohito, Japanese Patent Abstract Publication 2000-234904.

12. Pertaining to claims 13 and 14, Tomohito teaches a semiconductor device substantially as claimed, where the semiconductor chip having a wire connection portion and the electrical contact projection and the electrical contact projection are made of the same material. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

13. "The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature: than when a product

is claimed by conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to Applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983).

Conclusion

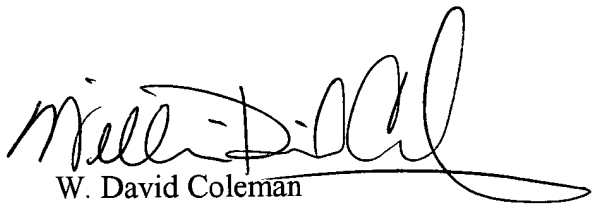
14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

15. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. David Coleman whose telephone number is 703-305-0004. The examiner can normally be reached on 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



W. David Coleman
Primary Examiner
Art Unit 2823

WDC
July 7, 2003